User's Manual

Features:

CFM/CMM Thermo-Anemometer + IR Thermometer

Large display of Airflow or Air Velocity plus model with built-in Infrared Thermometer

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. CFM/CMM Thermo- Anemometer with built-in non-contact IR Thermometer measures remote surface temperatures to 932°F (500°C) with 30:1 distance to spot ratio and Laser Pointer.

. Simultaneous display of Air Flow or Air Velocity plus Ambient Temperature.

. Up to 8 easy to set dimensions**(**ft^2 or cm^2) are stored in the meter's internal memory.

. 20 point average for Air Flow and Air velocity.

. Super large LCD Backlit Display.

. 3% velocity accuracy via low friction 2.83"D (72mm) ball bearing vane wheel on 3.9ft (120cm) cable.

. Data hold and Max/Min

. Can set Auto Power off or not.

. Complete with vane sensor with 3.9ft (120cm) cable, 9V battery, and protective rubber holster.

Applications:

HVAC installation,repair,diagnostics and optimization.
Fume hood testing,installation and verification.
Ventilation system installation ,servicing and analysis.
Environmental wind and temperature testing/analysis.
Boiler rooms.
Ionizer flow output monitoring.
Automobile aerodynamic testing.
Plant/Fancilities Maintenance.

Specifications:

Air Velocity	Range	Resolution	Accuracy
m/s	0.40－30.00	0.01	±3% ±0.20 m/s
ft/min	80－5900	1	±3% ±40 ft/min
km/h	1.4－108.0	0.1	±3% ±0.8 km/h
MPH	0.9－67.0	0.1	±3% ±0.4 MPH
Knots	0.8－58.0	0.1	±3% ±0.4 knots
Air Flow	Range	Resolution	Area
CFM	0-999900	0.001	0-999.9 ft^2
CMM	0-999900	0.001	0-999.9 m^2
Air Temperature	Range	Resolution	Accuracy
	14-140℉(-10-60℃)	0.1℉/C	±4.0℉(2.0℃)
InfraRed Temperature	Range	Resolution	Accuracy
	-58 to -4℉ (-50 to -20℃)	0.1℉/C	±9.0℉ (5.0℃)
	-4 to932℉ (-20 to500℃)	0.1℉/C	±2% reading or ±4℉ (2℃)

CFM(ft^3/min)=Air Velocity(ft/min)×Area(ft^2)

CMM(m^3/min)=Air Velocity(m/s)×Area(m^2)×60

CFM: cubic feet per minute

CMM: cubic meters per minute

	m/s	ft/min	km/h	MPH	knot
1 m/s	1	196.87	3.60	2.24	1.944
1 ft/min	0.00508	1	0.01829	0.01138	0.00987
1 km/h	0.2778	54.69	1	0.6222	0.54
1 MPH	0.4464	87.89	1.6071	1	0.8679
1 knot	0.5144	101.27	1.8519	1.1523	1

Meter Description:

1. LCD display for Air Velocity, Air Folw, Probe Temperature,and Remote surface Temperature. Units of measurement and user alerts are also displayed on the LCD.
2. Vane sensor. Hold the sensor in the flow of air to initiate a reading.
3. Protective rubber holster must be removed to access to the rear battery compartment.

4. Keypad(see blow)
- ⏻ Press to turn the meter ON or OFF
- **IR+Laser Pointer** Press and Hold to measure remote surface temperature.
- **MAX/MIN** Press to record and store the highest, lowest and continuous moving average readings for single point.Refer to the Operation section of this manual for more details. This button also fuctions as the LEFT scroll button in AREA mode.
- **UNITS** Press to select the mode of operation. In FLOW mode, the meter display air volume. In VELOCITY mode, the meter display air speed. This button also functions as the UP scroll button in AREA mode.
- **AVG** Used to obtain Average for multi-point in FLOW mode or VELOCITY mode. Up to 20 points can be averaged. Refer to the Operation section of this manual for more details.
- **AREA** Press and Hold to enter into the AREA mode(ft^2 or m^2) in CFM(ft^3/min) or CMM(m^3/min) mode.When recording MAX/MIN/AVG readings for single point,press to clear former recordings.
- **HOLD** Press to freeze the displayed reading. Press again to unlock diplay.
- ☼ Press to turn the backlight on. Press again to turn off.
- **MAX/MIN(TEMPERATURE)** Used to record and store the highest, lowest readings for probe temperature. Refer to the Operation section of this manual for more details.
- **HOLD(TEMPERATURE)** **P**ress to freeze the displayed reading for probe temperature. Press again to unlock display.

Operation:
A. MEASURING AIR VELOCITY AND AIR FLOW(SINGLE POINT)

1. Press the POWER button and turn meter on.Meter will show full display when first power on.

2. Unit is ready for use when LCD display shows "VEL" or "FLOW" on the middle and temperature in upper left corner.

B. Continuous Moving Average.

The meters displays continuous moving avgerage for up to 10 hours

1. Power uint on.
2. Place sensor in front of air flow source.
3. Press MAX/MIN key and unit begin to display moving average.the

meter will record the reading every second.

C. MAX/MIN/AVG READING ON A SINGLE POINT

To obtain MAX/MIN/AVG readings on a single point:
1. Power uint on.
2. Place sensor in front of air flow source.
3. Press MAX/MIN/AVG KEY,The uint will begin to record readings.
4. Press HOLD prior to moving instrument away from air flow source to stroe reading.
5. To clear the current MAX,MIN AND AVG readings,press and hold MAX/MIN key until unit beeps twice,then release.

D. AIR VELOCITY AVERAGE FOR MULTI POINTS（UP TO 20 POINTS）

1. Power unit on.
2. Hold AVG key until unit beeps twice,then release.the "0" will display at upper right corner,and "AVG" will display at lower right corner.
3. Place sensor in front of air flow source.
4. As soon as the first measurement is completed, press the AVG button (you will hear a single beep), and then release, the display will show a "HOLD" and a "AVG" under the reading. The reading is now being moved to internal memory. And the unit will display the average reading and number of points measured.The average reading is held for about 3 seconds.Repeat steps 4 until all desired points have been measured. This unit can record up to 20 points at one time. In AVG mode, press and hold AVG button for about 3 sec. to return.And press AREA button to clear memory of multi-point average reading.
4. The meter is now ready to measure air flow average for multipoints.

E. AREA SET

1. Power unit on.
2. Press UNITS key and selece CFM or CMM.
3. Hold AREA key until unit beeps twice,the "AREA" will display and enter area set mode.
4. Press the MAX/MIN key to shift the radix point.
5. Press the HOLD key to shift the flash position.
6. Press the UINTS key to adjust digit which is flash.

F. TO OBTAIN ROMOTE SURFACE TEMPERATURE USING INFRARED THERMOMETER

Press and Hold **IR+Laser Pointer** button to measure romote surface temperature.In this way,LCD display will show temperature reading of surface where Laser being point .Once you release the button,the displayed reading will rerurn to current air folw in 6 seconds but the "MAX","MIN" and "HOLD" ON.

G. DISABLE AUTO POWER OFF

The unit will turn off automatically after 15 minutes. When you turn the meter on, and press the ☼ button at the same time, the automatic power off feature will be disabled. Note that when the meter is in the "CFM/CMM" or "Average" mode automatic power off feature is disabled.

H. BATTERY REPLACEMENT

When ▭ appears on the LCD, the 9V battery must be replaced.
Remove the meter's rubber protective jacket, use a flat blade screwdriver to open the rear battery compartment, and replace the 9V battery. Finally, close the battery compartment and replace the jacket.

Safety:

Use extreme caution when the laser beam is turn on,do not let the beam enter your eye, another person's eye or the eye of an animal.

Be careful no to let the beam on a reflective surface strike your eye.

Do not allow the laser light beam impinge on any gas which can explode.